Indonesian Journal of Global Health Research
Volume 9 Number 1, February 2027
e-ISSN 2715-1972; p-ISSN 2714-9749
https://jurnal2.globalhealthsciencegroup.com/index.php/IJGHR

CERDIK MOVEMENT: HYPERTENSION EDUCATION AND CONTROL THROUGH THE IMPLEMENTATION OF A HEALTHY LIFESTYLE

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ABSTRACT
Hypertension is a major public health problem that requires preventive efforts through health education and the adoption of healthy lifestyles. The community health assessment conducted in Hamlet I and Hamlet II, Loli Pesua Village, Banawa District, Donggala Regency, Central Sulawesi, in 2026 identified hypertension as the most prevalent health problem, highlighting the urgency of implementing community-based prevention and control programs. This activity aims to identify community health problems and improve public knowledge and awareness of hypertension prevention and control through the implementation of the CERDIK healthy lifestyle program. A descriptive community-based approach was used, involving 70 respondents selected through purposive sampling. Data were collected through observation, interviews, questionnaires, and health examinations, instrument validity is the level of accuracy of the instrument in measuring the aspect to be studied. In this Thematic KKN activity, the assessment instrument uses a questionnaire that has been provided by Widya Nusantara University and has gone through a previous testing process. Therefore, the questionnaire was used as a data collection instrument to obtain information regarding public health conditions, especially hypertension and risk factors related to implementing healthy living behavior. It is hoped that the use of instruments that have been tested can support the accuracy of data obtained during the implementation of community assessment activities. The data were analyzed descriptively using frequency distributions and percentages. The findings showed that 35 respondents (50%) had hypertension. Unhealthy lifestyle patterns were also identified, including smoking inside the house in 46 households (65.71%), lack of regular physical activity in 58 respondents (82.86%), and frequent consumption of foods high in oil, salt, coconut milk, and sugar in 45 respondents (64.29%). These findings indicate the need for continuous health promotion and preventive interventions. The aim of this Thematic Real Work Lecture (KKN) activity is to increase the community's knowledge, awareness and ability to prevent and control hypertension through implementing a healthy lifestyle in the CERDIK Movement in Hamlet I and Hamlet II, Loli Pesua Village, Banawa District, Donggala Regency. It is hoped that this activity can increase public awareness to carry out regular health checks, avoid exposure to cigarette smoke, carry out regular physical activity, adopt a healthy and balanced diet, maintain adequate rest, and manage stress well. Through this educational activity, the public is expected to be able to recognize risk factors for hypertension and implement CERDIK behavior sustainably in their daily lives

Keywords: CERDIK: education; hypertension; implementation of a healthy lifestyle

First Received	Revised	Accepted
27 October 2026	11 November 2026	14 November 2026
Final Proof Received		**Published**
28 November 2026		01 February 2027

How to cite (in APA style)
Adesulistyawati, A., Pertiwi, F., Dansumara, M., Afriyani, N. R., Venilokasari, M., Sari, N., … Yulita, Y. (2026). Cerdik Movement: Hypertension Education and Control Through the Implementation of A Healthy Lifestyle. *Indonesian Journal of Global Health Research*, *9*(1), 349–358. https://doi.org/10.37287/ijghr.v9i1.2929.

INTRODUCTION

The Real Work Lecture (KKN) is a form of community service performed by university students, designed to apply academic knowledge and practical skills acquired during their studies to real-world community settings. The 2026 Thematic KKN program was implemented in Hamlet I and Hamlet II, Loli Pesua Village, Banawa District, Donggala Regency, Central Sulawesi Province. An initial assessment was conducted involving 70 Household Heads to identify priority health concerns and to plan educational and hypertension-control activities centered on healthy lifestyle practices.

Current public health challenges extend beyond communicable diseases to include a growing burden of non-communicable diseases (NCDs). Hypertension is one such priority NCD; it often persists over long periods without producing distinctive symptoms, meaning many individuals remain unaware they are affected. Consequently, proactive efforts are essential to prevent and manage hypertension through consistent, healthy daily behaviors.

Assessment findings identified hypertension as the most prevalent health problem, affecting 35 individuals (50.0%). Several behavioral risk factors were also documented: 46 Household Heads reported smoking indoors; 58 Household Heads engaged in insufficient physical activity; and 45 Household Heads consumed diets high in salt, oil, coconut milk, and sugar. Regarding disease management, 42 Household Heads reported a history of NCDs yet failed to take medication regularly. These findings clearly demonstrate the need for accessible, easy-to-understand, and practical health promotion and preventive interventions.

As the selected strategic framework, the CERDIK Movement encompasses six key healthy behaviors: Check health regularly, Eliminate tobacco smoke, Regular physical activity, Diet with balanced nutrition, Inadequate rest, and Keep stress under control. These six components represent simple, actionable steps that may be incorporated into daily life to reduce hypertension-related risk factors. Through this program, the community is expected to recognize hypertension risk factors, undergo regular blood pressure screening, and independently maintain healthy lifestyles on a sustainable basis. The validity test was conducted using the Pearson Product-Moment Correlation. The results showed that the calculated \(r\)-value was 0.430, while the \(r\)-table value was 0.212. Since the calculated \(r\)-value was greater than the \(r\)-table value (0.430 > 0.212), the instrument was considered valid. Meanwhile, the reliability test using Cronbach's Alpha yielded a value of 0.97, which exceeded the predetermined threshold of 0.85. Therefore, the instrument was considered reliable, indicating a very high level of internal consistency, Hypertension is a major public health concern in Desa Loli Pesua, affecting 50% of the surveyed population. This condition is frequently asymptomatic, meaning many individuals remain unaware of their elevated blood pressure until complications arise. Unhealthy lifestyle patternsincluding high-salt and high-fat diets, physical inactivity, tobacco use, and stress further exacerbate the risk. These factors are compounded by limited routine health screening and inconsistent medication adherence, creating a critical need for sustainable, community-based intervention. Therefore, this activity was conducted to address these gaps through the CERDIK initiative: Check health regularly, Eliminate tobacco smoke, Remain physically active, Diet healthily, Intake sufficient rest, and Keep stress under control.

The primary purpose of this initiative is to raise community awareness and understanding of hypertension, its risk factors, and prevention strategies. Specifically, it aims to equip residents with practical knowledge to monitor blood pressure periodically, reduce tobacco exposure at home, engage in regular physical exercise, adopt balanced low-sodium diets, prioritize adequate sleep, and manage stress effectively. By empowering individuals and families with these skills, the project seeks to foster lasting behavioral change, lower hypertension incidence, and improve overall community well-being in Dusun I and Dusun II, Desa Loli Pesua (Sugiyono, 2022).

METHOD

The 2026 Thematic Real Work Lecture (KKN) program was conducted in August 2026 in Hamlet I and Hamlet II, Loli Pesua Village, Banawa District, Donggala Regency. A direct assessment was carried out involving 70 Household Heads using questionnaires and environmental observation to identify community characteristics, health status, and health-related behaviors. Data collected included demographic profiles, types of illness, nutritional habits, clean and healthy living practices, and access to health services.

Based on assessment findings, hypertension and its associated risk factors were established as the priority health issue. A work program was subsequently developed comprising physical, non-physical, and supplementary activities structured around the CERDIK Movement framework. Program implementation included health education sessions, practical demonstrations, health screening, group exercise classes, installation of information media, household medicinal plant gardening, and environmental sanitation improvement. All activities were carried out with direct community participation and received full support from the Loli Pesua Village Government, Data were collected in August 2026 through direct assessment involving 70 household heads in Hamlet I and Hamlet II, Loli Pesua Village, Banawa District, Donggala Regency. Two methods were employed: structured questionnaires administered to gather information on demographic characteristics, health status, disease history, dietary and nutritional habits, clean and healthy living practices, access to health services, health insurance coverage, and household economic conditions; and direct environmental observation to assess sanitation, waste disposal, housing ventilation, yard utilization, and overall environmental cleanliness. The collected data were processed and analyzed using descriptive statistics, where frequency counts and percentage distributions were calculated and presented in tabular form. The findings were interpreted to identify priority health issues and associated behavioral risk factors, which then served as the basis for designing a targeted intervention program structured around the CERDIK Movement framework. Data were analyzed descriptively using frequency distributions and percentages to describe the prevalence of health problems and lifestyle risk factors among the 70 respondents. The analysis included the occurrence of hypertension, smoking habits, physical activity, and dietary patterns. The results were used to identify priority health problems and provide a basis for developing community-based hypertension prevention and control activities through the CERDIK program.

RESULT

Table 1.
Frequency Distribution of Occupation in Loli Pesua Village (n = 70)

Occupation	f	%
Entrepreneur / Self-Employed	28	40.0
Housewife	18	32,9
Farmer	23	25,7
Civil Servant	1	1,4

According to the table showing the occupational distribution of respondents, of the 70 Household Heads assessed, the majority were self-employed, totaling 28 individuals (40.0%). This was followed by homemakers at 23 individuals (32.9%), farmers at 18 individuals (25.7%), and only 1 individual (1.4%) who were civil servants.

Table 2.
Frequency Distribution of Age Groups in Loli Pesua Village (n = 70)

Age Group (Years)	f	%
2-5	15	21,43
18–40	25	35,71
40–60	22	31,43
>60	8	11,43

According to the table showing age distribution, among the 70 respondents, the 18–40 years age group was the largest, comprising 25 respondents (35.71%). Meanwhile, the >60 years age group was the smallest, with 8 respondents (11.43%).

Table 3.
Frequency Distribution of Sex in Loli Pesua Village (n = 70)

Gender	f	%
Male	46	65,71
Female	24	34,29

According to the table showing sex distribution, of the total of 70 respondents, the majority were male, amounting to 46 individuals (65.71%), while the smallest group was female, comprising 24 individuals (34.29%).

Table 4.
Frequency Distribution of Education Levels in Loli Pesua Village (n = 70)

Pendidikan	f	%
Bachelor's Degree (S1)	2	2,86
Senior High School (SMA)	9	12,86
Junior High School (SMP)	10	14,29
Elementary School (SD)	36	51,43
No Formal Education	13	18,57

According to the table showing educational attainment, of the total of 70 respondents, the most common education level was Elementary School, with 36 individuals (51.43%), while the smallest group was Bachelor's Degree, comprising 2 individuals (2.86%).

Table 5.
Frequency Distribution of Disease Types in Loli Pesua Village (n = 70)

Type of Disease	f	%
Hypertension	35	50,00
Stunting	15	21,43
Diabetes Mellitus	10	14,29
Gout	2	2,86
Scabies	6	8,57
Tuberculosis (TBC)	2	2,86

According to the table showing disease distribution, of the total of 70 respondents, the most prevalent health condition was Hypertension, affecting 35 individuals (50.0%), while the least common condition was Tuberculosis, with 2 individuals (2.86%).

Table 6.
Frequency Distribution of Local Nutrition and Dietary Practices

Code	Question / Indicator	Category	f	%
G01	Consumption of local protein	Every day	70	100.00
		3–5 times per week	0	0.00
		1–2 times per week	0	0.00
		Never	0	0.00
G02	Consumption of fruits and vegetables	Every day	22	31.43
		3–5 times per week	37	52.86
		1–2 times per week	11	15.71
		Never	0	0.00
G03	Home yard/garden utilization	Yes, for own consumption	5	7.14
		Yes, for own consumption & sale	6	8.57
		None	59	84.29
G04	Proper vegetable processing practices	Yes, practiced	47	67.14
		Know the theory, not practiced	23	32.86
		Do not know	0	0.00
G05	Consumption of instant/preserved foods	Frequently >3 times/week	9	12.86
		Rarely 1–2 times/week	56	80.00
		Never	5	7.14
G06	Excess oil/salt/coconut milk/sugar use	Yes, frequently	45	64.29
		Occasionally	19	27.14
		No, already restricted	6	8.57
G07	Knowledge of the "My Plate" guideline	Yes, knowledgeable	20	28.57
		Heard of it, do not understand portions	34	48.57
		Do not know	6	8.57
G08	Exclusive breastfeeding	Yes	8	11.43
		No children under 5 years	67	95.71
G09	Complementary feeding	Homemade / local ingredients	8	11.43
		Factory-packaged instant	0	0.00
		Mixed both	0	0.00

Code	Question / Indicator	Category	f	%
		No children under 5 years	67	95.71
G10	Iron/Folic Acid Supplementation (TTD)	Yes, routinely	23	32.86
		Occasionally forget	9	12.86
		Never	0	0.00
		No target respondents	29	41.43
G11	Signs of malnutrition/stunting/anemia	Yes, present	15	21.43
		None	55	78.57
G12	Food taboos/misconceptions	Yes, present	0	0.00
		No restrictions	70	100.00
G13	Food storage practices	Refrigerator / closed cabinet	57	81.43
		Open on table/uncovered	13	18.57
G14	Drinking ≥8 glasses of water daily	Yes, sufficient intake routinely	36	51.43
		Less than 8 glasses	34	48.57
G15	Unregulated snack consumption by children	Very frequently	16	22.86
		Occasionally	25	35.71
		Never / supervised / brings lunch	29	41.43

Assessment findings revealed that 60.00% of individuals living with non-communicable diseases did not seek regular medical treatment, indicating poor adherence to disease management regimens. Indoor smoking remained highly prevalent at 65.71%, posing health risks to all household members. Regular physical activity was extremely low, reported by only 17.14% of respondents. When feeling unwell, the majority of the community preferred purchasing over-the-counter medicine from local vendors (70.00%) rather than visiting official health facilities. While most households already had improved sanitation facilities (97.14%) and access to protected clean water, improper waste disposal practices persisted among 37.14% of residents. Household ventilation was generally adequate, and the 3M Plus vector control program had been implemented comprehensively throughout the area.

Table 7.
Frequency Distribution of Health Care and Insurance Indicators

Code	Question / Indicator	Category	f	%
G01	Consumption of local protein	Every day	70	100.00
		3–5 times per week	0	0.00
		1–2 times per week	0	0.00
		Never	0	0.00
G02	Consumption of fruits and vegetables	Every day	22	31.43
		3–5 times per week	37	52.86
		1–2 times per week	11	15.71
		Never	0	0.00
G03	Home yard/garden utilization	Yes, for own consumption	5	7.14
		Yes, for own consumption & sale	6	8.57
		None	59	84.29
G04	Proper vegetable processing practices	Yes, practiced	47	67.14
		Know the theory, not practiced	23	32.86
		Do not know	0	0.00
G05	Consumption of instant/preserved foods	Frequently >3 times/week	9	12.86
		Rarely 1–2 times/week	56	80.00
		Never	5	7.14
G06	Excess oil/salt/coconut milk/sugar use	Yes, frequently	45	64.29
		Occasionally	19	27.14
		No, already restricted	6	8.57
G07	Knowledge of the "My Plate" guideline	Yes, knowledgeable	20	28.57
		Heard of it, do not understand portions	34	48.57
		Do not know	6	8.57
G08	Exclusive breastfeeding	Yes	8	11.43
		No children under 5 years	67	95.71
G09	Complementary feeding	Homemade / local ingredients	8	11.43
		Factory-packaged instant	0	0.00

Code	Question / Indicator	Category	f	%
		Mixed both	0	0.00
		No children under 5 years	67	95.71
G10	Iron/Folic Acid Supplementation (TTD)	Yes, routinely	23	32.86
		Occasionally forget	9	12.86
		Never	0	0.00
		No target respondents	29	41.43
G11	Signs of malnutrition/stunting/anemia	Yes, present	15	21.43
		None	55	78.57
G12	Food taboos/misconceptions	Yes, present	0	0.00
		No restrictions	70	100.00
G13	Food storage practices	Refrigerator / closed cabinet	57	81.43
		Open on table/uncovered	13	18.57
G14	Drinking ≥8 glasses of water daily	Yes, sufficient intake routinely	36	51.43
		Less than 8 glasses	34	48.57
G15	Unregulated snack consumption by children	Very frequently	16	22.86
		Occasionally	25	35.71
		Never / supervised / brings lunch	29	41.43

According to Table 2.7, the majority of respondents reported a history of non-communicable diseases yet did not take medication regularly, totaling 42 individuals (60.00%). Most respondents had not experienced any communicable disease in the preceding month, amounting to 62 individuals (88.57%). Smoking was most commonly practiced indoors, reported by 46 individuals (65.71%).

Table 8.
Frequency Distribution of Financial and Entrepreneurship Indicators

Code	Indicator	Category	f	%
A01	JKN/BPJS Enrollment	All members active	70	100.00
		Partial	0	0.00
		None	0	0.00
A02	BPJS Payment Status	Routinely paid	23	32.86
		Frequently in arrears	0	0.00
		PBI/Employer-funded	47	67.14
A03	Mobile JKN Application	Have & know how to use	14	20.00
		Have but do not know functions	0	0.00
		Do not have	56	80.00
A04	JKN Administrative Barriers	Experienced/frequent	0	0.00
		Never / smooth process	70	100.00
A05	Referral System Understanding	Yes, understand	37	52.86
		Lack understanding / do not know	33	47.14
A06	Health Facility Access	Close & easy to reach	70	100.00
		Far & difficult	0	0.00
A07	Emergency Medical Transport	Private vehicle	56	80.00
		Public transportation	0	0.00
		On foot / no vehicle	14	20.00
A08	Independent/Small Business (UMKM)	Operating business	7	10.00
		Previously operated, now closed	0	0.00
		Never started	63	90.00
A09	Interest in Local Food Business	Very interested	52	74.29
		Less interested	18	25.71
A10	Business Constraints	Financial capital	63	90.00
		Marketing & packaging	0	0.00
		Skills/knowledge	0	0.00
		No obstacles	7	10.00
A11	Income Sufficiency	Sufficient & able to save	31	44.29
		Just enough / break-even	39	55.71
		Often insufficient / in debt	0	0.00
A12	Emergency Fund/Savings	Already prepared	44	62.86
		None / rely on loans	26	37.14

All respondents were registered under the National Health Insurance / BPJS scheme with active coverage, and health facilities were found to be geographically accessible. The majority of contributions were subsidized by the PBI program or employers (67.14%). However, only 20% understood how to use the Mobile JKN application, and nearly half were unfamiliar with the referral system. In the event of a medical emergency, 80% relied on private transportation. Economically, 90% did not operate an independent business, citing limited capital as the primary barrier. Most households reported modest incomes (55.71%), and 37.14% had not set aside any emergency savings.

DISCUSSION

All work programs implemented during the 2026 Thematic Real Work Lecture (KKN) in Hamlet I and Hamlet II, Loli Pesua Village, were designed based on the findings of the preliminary community assessment. The assessment identified hypertension in 35 individuals (50.0%), along with behavioral risk factors such as indoor smoking, low physical activity, and unhealthy dietary patterns. Additionally, stunting was recorded in 15 individuals (21.43%), while the implementation of Clean and Healthy Living Behavior (PHBS) and environmental sanitation remained suboptimal. Therefore, the programs were developed to promote hypertension prevention, improve nutritional awareness, and strengthen community health practices. Physical inactivity was addressed through the Hypertension Exercise Program, which encouraged residents to participate in regular group exercise. Regular physical activity is an important component of hypertension prevention and management, and community-based exercise interventions may help improve blood pressure control (Rahmawati et al., 2022). The Free Blood Pressure Screening program was also implemented to support early detection and encourage residents to monitor their blood pressure regularly.

Aungsuroch et al. (2022) reported that a self-management program incorporating physical activity, dietary modification, blood pressure monitoring, and health education improved blood pressure outcomes among Indonesian patients with hypertension. Furthermore, the PHBS Education Program addressed personal hygiene, proper handwashing, environmental cleanliness, waste management, sanitation, and healthy nutrition. Health education can improve knowledge and awareness of hygiene practices, supporting preventive behaviors within the community (Yuliani et al., 2021). The Stunting and Balanced Nutrition Education Program was conducted to increase residents' understanding of adequate nutrition, appropriate child-feeding practices, and the importance of balanced diets throughout the life course. Tengkawan et al. (2022) demonstrated the value of practical education in improving parental knowledge and practices related to complementary feeding, while Beatty et al. (2024) emphasized the importance of comprehensive, sustained community-based interventions to address stunting. To reinforce health messages beyond direct educational sessions, information boards on PHBS, balanced nutrition, and stunting prevention were installed in strategic locations throughout the village. These boards were intended to provide continuing visual reminders that encourage residents to apply healthy practices in their daily lives.

In addition, the Household Medicinal Plant Gardening (TOGA) Program encouraged residents to cultivate medicinal plants in their home gardens to support household participation in health promotion. However, medicinal plants should complement rather than replace professional medical care and prescribed treatment for hypertension. The commemoration of Indonesia's Independence Day was also organized to strengthen social relationships, community solidarity, and collective participation. Such activities provide opportunities for recreation and social interaction, which complement the stress-management component of the CERDIK Movement. Overall, these programs reflect a comprehensive community health promotion approach that integrates regular health checks, physical activity, balanced nutrition, hygiene, environmental sanitation, and community participation. The findings of previous studies provide a research-based rationale for these interventions, although

further evaluation is needed to determine their long-term effects on health outcomes in Loli Pesua Village.

CONCLUSION

All implemented work programs were interconnected, directly addressing the various health concerns and risk factors identified during the preliminary assessment. From blood pressure screening and increased physical activity, through hygiene and nutrition education, the installation of information media, household medicinal plant cultivation, and community solidarity activities every component was integrated to improve community knowledge, awareness, and capability in adopting healthy lifestyles. Collectively, these activities not only focus on hypertension prevention and control through the CERDIK Movement, but also encompass child nutrition, environmental sanitation, household self-reliance in health care, and social cohesion all of which serve as essential foundations for building a healthy and prosperous community.

DECLARATIONS

Acknowledgements: The authors would like to express their sincere gratitude to Universitas Widya Nusantara for the guidance, support, and motivation provided throughout the implementation of the KKN program and the preparation of this report, which contributed to the successful completion of the program.

Conflicts of Interest: The authors declare that there are no conflicts of interest related to the implementation of the community service program or the preparation and publication of this manuscript.

Ethical Approval: This community service activity was conducted with permission and coordination from the relevant local authorities. All participants were involved voluntarily, and their privacy and confidentiality were respected throughout the implementation of the activities.

Financial Support and Sponsorship: This community service activity was supported by the authors and the resources available through the KKN program. No external financial support or sponsorship was received for the implementation of the activities or the preparation of this manuscript.

Data Availability Statement: The data supporting the findings of this community service activity are available from the corresponding author upon reasonable request, subject to applicable privacy and confidentiality considerations.

Author Contributions: All authors contributed to the planning, implementation, and preparation of the community service activities and manuscript. All authors participated in reviewing and approving the final version of the manuscript.

Declaration of the Use of Artificial Intelligence in Scientific Writing: Artificial intelligence tools were used to assist in language editing and manuscript preparation. The authors reviewed and verified the content and take full responsibility for the accuracy, originality, and integrity of the manuscript.

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